Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Notes Questions for the Unit 2, Part 2 Notes – Classification and Biodiversity**

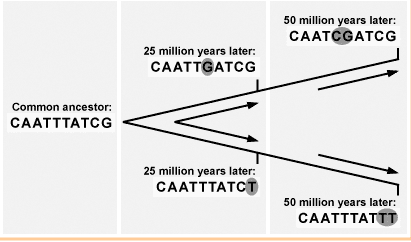
Mrs. Krouse, AP Biology, 2015-2016

***Vocabulary:*** *For each of the terms listed below, fill in the definition given in the notes in the first column. In the second column, I may ask you to break down a term into its parts to better understand its meaning.*

|  |  |  |
| --- | --- | --- |
| **Vocabulary Term and Synonyms** | **Definition(s) Given in the Notes** | **Memory Trick and / or** **Breaking down the Word** |
| Phylogeny |  | You don’t need to fill in this column for this term ☺ |
| Cladograms |  | You don’t need to fill in this column for this term ☺ |
| Shared, Derived Traits (aka Synapomorphies) |  | You don’t need to fill in this column for this term ☺ |
| Phylogenetic Trees |  | You don’t need to fill in this column for this term ☺ |
| Molecular Clock Sequences |  | **Breaking Down the Word:** How does “clock” help clarify the meaning of this term? |
| Universal Common Ancestor |  | **Breaking Down the Word:** How does “universal” help clarify the meaning of this term? |

***Practice Questions:*** *Answer the following questions thoroughly and accurately in complete sentences.*

1. Explain why we use shared derived traits (aka synapomorphies) instead of shared ancestral traits to create a cladogram. (Hint: You may want to discuss the jellyfish, starfish, and human example given in the notes.)



1. Explain how the DNA sequences shown in the picture to the right can be used to predict how long ago the two species diverged from their common ancestor.
2. Identify the characteristics of the universal common ancestor that are found in all living things today.
3. Describe what the universal common ancestor may have “looked like.”
4. How and why have the “grouping systems” that scientists have used to classify organisms (ex: kingdoms, domains) changed over time?
5. Identify the characteristics shared by all members of Domain Eukarya.